BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of	)	
	)	
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2008-0273
	)	
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs.	)	
	)	
	)	

TAWHIRI POWER LLC'S RESPONSES TO INFORMATION REQUESTS FROM THE COMMISSION'S CONSULTANT, THE NATIONAL REGULATORY RESEARCH INSTITUTE

AND

CERTIFICATE OF SERVICE

HARLAN Y. KIMURA
ATTORNEY AT LAW, A LAW CORPORATION
Central Pacific Plaza
220 South King Street, Suite 1660
Honolulu, Hawaii 96813
Telephone No. (808) 521-4134

Attorney for Tawhiri Power LLC

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of	)	
	)	
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2008-0273
	)	
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs.	)	
	)	
	)	
	)	

TAWHIRI POWER LLC'S
RESPONSES TO INFORMATION REQUESTS FROM THE COMMISSION'S CONSULTANT, THE NATIONAL REGULATORY RESEARCH INSTITUTE

Pursuant to the Commission's Letter to the Parties dated March 2, 2009, Tawhiri Power LLC hereby submits the following Responses to Information Requests to the Commission's consultant, the National Regulatory Research Institute.

Respectfully submitted.

DATED: Honolulu, Hawaii, March 16, 2009.

HARLAN Y. KIMURA

Attorney for Tawhiri Power LLC

V. Questions for Tawhiri Power and First Wind Hawaii

A. Cost considerations

52. On a $/MW basis, what interconnection costs have you experienced or do you anticipate for wind projects in Hawaii? Please describe how interconnection costs vary by location and project size.

RESPONSE:

Interconnection costs for wind projects in Hawaii generally could range from $350,000/MW to $1,000,000/MW, or more, for a 30MW project.

Interconnection costs vary greatly by location and project size. For instance, the closer a project's location to a utility's circuit the lower the interconnection costs. On the other hand, a project located a significant distance from a utility's circuit may require the construction of a dedicated trunk-line/generation tie to receive and transmit the generated energy. With respect to a project's size, larger ones may benefit from economies of scale associated with interconnection, and other, costs. However, at certain threshold capacities increasing a project's generation would require higher voltage transformers and, consequently, significantly raise its interconnection costs. Therefore, and notwithstanding other economic and siting considerations and constraints, a project's size should be just below the threshold level that would trigger enforcement of a step-up in the utility's technical interconnection requirements to take advantage of the available economies of scale associated with that level.

53. Based on your experience, are there sufficient wind resources and available land on Oahu for additional development of either MW-class or small wind turbines? If so, please elaborate on where such projects may be possible and how large they could cumulatively be.

RESPONSE:

Tawhiri does not have any experience to determine whether there are sufficient wind resources and available land on Oahu for additional development of either MW-class or small wind turbines because it has not conducted any research in this area. Even if one were to assume there is available land on Oahu, those sites would require extensive wind resource measurements and analysis to determine the investment levels that could render them economically feasible.

//

//

//

54. Based on your experience, how much more expensive in $/MW are wind turbines in Hawaii than is typical in the mainland United States? Please describe the differences in detail. Is this difference changing or likely to persist?

RESPONSE:

The installed $/MW costs of wind turbines in "Hawaii" are generally 50% to 100% higher than mainland costs. Hawaii's construction costs which are typically between 25% and 50% greater, contribute significantly to the increased cost of installation. These price differentials may increase if the rate of renewable energy development rapidly rises in Hawaii.

55. Based on your experience, how much more expensive in $/MW are permitting, land acquisition, and installation, including crane rental, in Hawaii than is typical in the mainland United States? Please describe such differences in detail. Is this difference changing or likely to persist?

RESPONSE:

Permitting, land acquisition, and installation, including crane rental, in Hawaii are generally 25% to 50% more expensive than on the mainland United States. Although crane rental costs in Hawaii are only slightly higher, those costs increase dramatically when taking into account highway and ocean transportation charges, setup and breakdown expenses, and on-site operations and maintenance. Tawhiri expects these higher costs will remain, or even increase, with the accelerated development of renewable energy projects in this state.

B. Small wind in Hawaii

56. Are there any installed wind turbines in Hawaii with less than 150 kW of capacity? If so, please describe their sizes in kWs, locations, total number, aggregate capacity, and installation years.

RESPONSE:

Tawhiri is only aware of a few 10kW wind turbines that are located on ranches or homes on the Big Island. Additionally, Tawhiri understands that HELCO operates 18kW Jacobs units at Lalamilo, Hawaii.

//

//

57. Are wind turbines of less than 150 kW generally utility curtailable? Please describe any additional expense associated with modifying small wind turbines to make them curtailable.

RESPONSE:

Yes. Tawhiri understands that if the wind turbines are "pitch regulated" newer models, communications and hardware/software controls may be installed to remotely [i.e. utility dispatch] curtail those units. The communications costs would generally encompass fiber optic cables and microwave equipment. More importantly, the hardware/software enabling equipment needed to modify these units to permit the curtailment function will significantly increase their basic cost.

58. Please identify all environmental regulations, zoning ordinances, and other barriers to the development of wind resources in Oahu. Please describe such restrictions for both small wind turbines and large wind farms.

RESPONSE:

Tawhiri has not actively undertaken wind development on Oahu and, thus, is unable to respond to this question.

CERTIFICATE OF SERVICE

The foregoing Responses to Information Requests were served on the date of filing by hand delivery or electronically transmitted to the following Parties:

CATHERINE P. AWAKUNI
EXECUTIVE DIRECTOR
DEPT OF COMMERCE & CONSUMER AFFAIRS
DIVISION OF CONSUMER ADVOCACY
P.O. Box 541
Honolulu, Hawaii 96809

2 Copies
Via Hand Delivery

MR. DEAN MATSUURA
MANAGER
REGULATORY AFFAIRS
HAWAIIAN ELECTRIC COMPANY, INC.
P.O. Box 2750
Honolulu, HI 96840-0001

Electronically transmitted

MR. JAY IGNACIO
PRESIDENT
HAWAII ELECTRIC LIGHT COMPANY, INC.
P. O. Box 1027
Hilo, HI 96721-1027

Electronically transmitted

MR. EDWARD L. REINHARDT
PRESIDENT
MAUI ELECTRIC COMPANY, LTD.
P. O. Box 398
Kahului, HI 96732

Electronically transmitted

THOMAS W. WILLIAMS, JR., ESQ.
PETER Y. KIKUTA, ESQ.
DAMON L. SCHMIDT, ESQ.
GOODSILL, ANDERSON QUINN & STIFEL
Alii Place, Suite 1800
1099 Alakea Street
Honolulu, Hawaii 96813

Electronically transmitted

Co-Counsel for HECO, HELCO, and MECO

//

ROD S. AOKI, ESQ.
ALCANTAR & KAHL LLP
120 Montgomery Street
Suite 2200
San Francisco, CA 94104

Electronically transmitted

Co-Counsel for HECO, HELCO, and MECO

MARK J. BENNETT, ESQ.
DEBORAH DAY EMERSON, ESQ.
GREGG J. KINKLEY, ESQ.
DEPARTMENT OF THE ATTORNEY GENERAL
425 Queen Street
Honolulu, Hawaii 96813

Electronically transmitted

Counsel for DBEDT

CARRIE K.S. OKINAGA, ESQ.
GORDON D. NELSON, ESQ.
DEPARTMENT OF THE CORPORATION COUNSEL
CITY AND COUNTY OF HONOLULU
530 South King Street, Room 110
Honolulu, Hawaii 96813

Electronically transmitted

LINCOLN S.T. ASHIDA, ESQ.
WILLIAM V. BRILHANTE JR., ESQ.
MICHAEL J. UDOVIC, ESQ.
DEPARTMENT OF THE CORPORATION COUNSEL
COUNTY OF HAWAII
101 Aupuni Street, Suite 325
Hilo, Hawaii 96720

Electronically transmitted

MR. HENRY Q CURTIS
MS. KAT BRADY
LIFE OF THE LAND
76 North King Street, Suite 203
Honolulu, Hawaii 96817

Electronically transmitted

MR. CARL FREEDMAN
HAIKU DESIGN & ANALYSIS
4234 Hana Highway
Haiku, Hawaii 96708

Electronically transmitted

//

//

MR. WARREN S. BOLLMEIER II — Electronically transmitted
PRESIDENT
HAWAII RENEWABLE ENERGY ALLIANCE
46-040 Konane Place, #3816
Kaneohe, Hawaii 96744

DOUGLAS A. CODIGA, ESQ. — Electronically transmitted
SCHLACK ITO LOCKWOOD PIPER & ELKIND
TOPA FINANCIAL CENTER
745 Fort Street, Suite 1500
Honolulu, Hawaii 96813

Counsel for BLUE PLANET FOUNDATION

MR. MARK DUDA — Electronically transmitted
PRESIDENT
HAWAII SOLAR ENERGY ASSOCIATION
P.O. Box 37070
Honolulu, Hawaii 96837

MR. RILEY SAITO — Electronically transmitted
THE SOLAR ALLIANCE
73-1294 Awakea Street
Kailua-Kona, Hawaii 96740

MR. JOEL K. MATSUNAGA — Electronically transmitted
HAWAII BIOENERGY, LLC
737 Bishop Street, Suite 1860
Pacific Guardian Center, Mauka Tower
Honolulu, Hawaii 96813

KENT D. MORIHARA, ESQ. — Electronically transmitted
KRIS N. NAKAGAWA, ESQ.
SANDRA L. WILHIDE, ESQ.
MORIHARA LAU & FONG LLP
841 Bishop Street, Suite 400
Honolulu, Hawaii 96813

Counsel for HAWAII BIOENERGY, LLC and
MAUI LAND & PINEAPPLE COMPANY, INC.

MR. THEODORE E. ROBERTS — Electronically transmitted
SEMPRA GENERATION
101 Ash Street, HQ 12
San Diego, California 92101

MR. CLIFFORD SMITH
MAUI LAND & PINEAPPLE COMPANY, INC.
P.O. Box 187
Kahului, Hawaii 96733

Electronically transmitted

MR. ERIK KVAM
CHIEF EXECUTIVE OFFICER
ZERO EMISSIONS LEASING LLC
2800 Woodlawn Drive, Suite 131
Honolulu, Hawaii 96822

Electronically transmitted

MR. JOHN N. REI
SOPOGY INC.
2660 Waiwai Loop
Honolulu, Hawaii 96819

Electronically transmitted

GERALD A. SUMIDA, ESQ.
TIM LUI-KWAN, ESQ.
NATHAN C. NELSON, ESQ.
CARLSMITH BALL LLP
ASB Tower, Suite 2200
1001 Bishop Street
Honolulu, Hawaii 96813

Counsel for HAWAII HOLDINGS, LLC,
dba FIRST WIND HAWAII

Electronically transmitted

MR. CHRIS MENTZEL
CHIEF EXECUTIVE OFFICER
CLEAN ENERGY MAUI LLC
619 Kupulau Drive
Kihei, Hawaii 96753

Electronically transmitted

//

//

//

//

//

//

//

SANDRA-ANN Y.H. WONG, ESQ.
ATTORNEY AT LAW, A LAW CORPORATION
1050 Bishop Street, #514
Honolulu, HI 96813

Electronically transmitted

Counsel for ALEXANDER & BALDWIN, INC.,
Through its division, HAWAIIAN COMMERCIAL & SUGAR COMPANY

DATED: Honolulu, Hawaii, March 16, 2009.

HARLAN Y. KIMURA

Attorney for Tawhiri Power LLC